

REMARKS**A. Status of the Claims and Explanation of the Amendments**

Prior to the submission of this paper, claims 21-52 were pending, and original claims 1-20 had been cancelled. Of the pending claims, claims 21-32 and 41-46 have been withdrawn. Thus, only claims 33-40 and 47-52 are currently presented for examination.

Claims 33, 35, 38, 39, and 47-49 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 4,138,195 to Saurer (“Saurer”), in view of U.S. Patent No. 4,580,977 to Washo et al. (“Washo”). Claim 34 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Saurer, in view of Washo, and in further view of U.S. Patent No. 6,466,368 to Piepel (“Piepel”). Claims 36 and 50 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Saurer, in view of Washo, and in further view of U.S. Patent No. 6,113,801 to Savant (“Savant”). Claims 37 and 51 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Saurer, in view of Washo, and in further in view of U.S. Patent No. 6,480,249 to Iwata (“Iwata”). Claims 40 and 52 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Saurer, in view of Washo and U.S. Patent No. 6,195,142 to Gyotoku (“Gyotoku”).

In this paper, Applicants have amended independent claims 33 and 47 (i.e., the only independent claims under examination) to further clarify the invention. These claims now recite, *inter alia*, “a scattering portion for scattering light, wherein the scattering portion is located between the substrate and the reflective electrode inclusive, such that the light is scattered before and after it is reflected from the reflective electrode.” Support for these amendments is generally found throughout the specification [see, e.g., page 9, line 32 to page 10, line 10]. No new matter has been entered by these amendments.

B. Applicant's Claims Are Not Unpatentable
Over the Cited References

Applicants respectfully traverse the rejections under 35 U.S.C. §103(a) of claims 33, 35, 38, 39 and 47-49 over Saurer, in view of Washo; claim 34 over Saurer, in view of Washo and Piepel; claims 35 and 50 over Saurer, in view of Washo and Savant; claims 37 and 51 over Saurer, in view of Washo and Iwata; and claims 40 and 52 over Saurer, in view of Washo and Gyotoku.

As discussed below, these rejections under 35 U.S.C. §103(a) should be withdrawn, because (1) the cited references fail to teach, disclose, or suggest all of the claim elements of Applicants' claims; (2) there is no proper motivation to combine the references in the manner proposed by the Office Action; or (3) the references themselves teach away from the proposed combination. See MPEP §§ 2143 and 2145.

1. Saurer and Washo Fail to Teach, Disclose, or
Suggest All of Applicants' Claim Elements

Saurer is directed to an electro-optic passive display device. According to Saurer, the device includes a rear glass-plate 3 which carries, on an outer face, a conductive transparent coating 4 that is covered by an insulating transparent coating 5. An electro-luminescent film 6 is deposited on the insulating transparent coating 5, and a second insulating transparent coating 7 is deposited on the electro-luminescent film 6, such that the electro-luminescent film 6 is sandwiched between the two insulating transparent coatings 5 and 7. Additionally, an opaque conductive metallic coating 8 that acts as a reflector/diffuser and as an activation electrode is

deposited onto the second insulating transparent coating 7 [see, e.g., Saurer, col. 1, lines 36-57 and Figure 1].

The Office Action alleges that Saurer teaches all of the claim elements of claims 33, 35, 38, 39, and 47-49, with the exception of a passivation film located on the reflective electrode. For this claim element, the Office Action relies on Washo, and in particular, on Washo's discussion of a moisture-resistant film 11 that is deposited on metal electrode 10 [see Washo, col. 2, lines 45-47].

Applicants, however, respectfully assert that neither Saurer and Washo, alone or in combination, teach, disclose, or suggest "a scattering portion for scattering light, wherein the scattering portion is located between the substrate and the reflective electrode inclusive, such that the light is scattered before and after it is reflected from the reflective electrode" as recited in Applicants' claims. At best, Saurer device scatters light only once when the light is reflected from Saurer's metallic coating 8 that acts as a reflector-diffuser. In other words, Saurer's device does not scatter light "before and after it is reflected from the reflective electrode" as recited in Applicants' claims.

Washo does not alleviate this deficiency of Saurer. At best, Washo merely discloses placing a rugged surface or a semi-transparent film (e.g., parchment paper) between Washo's LCD and electroluminescent device. Thus, Washo also does not appear to teach, expressly or otherwise, a "scattering portion...located between the substrate and the reflective electrode inclusive, such that the light is scattered before and after it is reflected from the reflective electrode" as recited in Applicants' claims.

Because not claim elements are taught or suggested, the rejection of claims 33, 35, 38, 39, and 47-49 under 35 U.S.C. §103(a) should be withdrawn. MPEP §2143. Applicants respectfully request reconsideration and withdrawal of the rejection of these claims.

2. There is No Proper Motivation to Combine
Saurer, Washo, and Piepel

According to the Office Action, “Saurer and Washo disclose all limitations of [claim 34], except the scattering portion located between the electroluminescent layers and the substrate inclusive” [Office Action, page 3, lines 19-21]. For this claim element, the Office Action relies on Piepel, arguing that “Piepel discloses a diffusive substrate with midrange diffusivity, that significantly reduces in speckle contrast, without having a significant effect on the peak gain or the viewing angle (column 13, lines 4-11).” [Office Action, bridging paragraph between pages 3 and 4]. With this combination in mind, the Office Action concludes that “it would have been obvious to one of ordinary skill in the art to use a diffusive substrate, thus having the scattering portion located between the substrate and the electroluminescent layer to avoid speckle contrast” [Office Action, page 4, lines 1-4].

Applicants respectfully disagree. Piepel is directed to a technological field that is significantly different from that of Saurer and Washo. More specifically, whereas Saurer and Washo are directed to electroluminescent devices, Piepel is merely directed to standalone screen assemblies that can be used in conjunction with an image projector that projects an image onto the rear side of the screen assembly [see Piepel, Figure 1, and col. 3, lines 49-51]. Moreover, there is no teaching in any of the references that Piepel’s diffusive substrate in its standalone screen assembly could be integrated with any electroluminescent device, let alone the ones

specifically discussed by Saurer and/or Washo. For at least this reason, Applicants maintain that the Office Action has not provided a proper motivation to combine these references, and that the rejection of claim 34 under 35 U.S.C. §103(a) should be withdrawn. MPEP §2143.

3. Saurer, in view of Washo and Savant Do Not
Teach All of the Elements of Claims 36 and 50

The Office Action alleges that “Saurer and Washo disclose all the limitations of [claims 36 and 50] except [that the] scattering portion is a layer wherein scattering bodies are minute concavities and convexities” [Office Action, page 4, lines 8-10]. For this claim element, the Office Action relies on Savant, alleging that “Savant discloses a light-scattering portion wherein the scattering bodies are minute concavities and convexities (see Figures 1A-1F) for easy uniform replication of a diffuser independent of production scale...” [Office Action, page 4, lines 10-12]. On this basis, the Office Action concludes that “it would have been obvious to one of ordinary skill in the art to use scattering bodies [sic bodies] of minute concavities and convexities to gain an easily reproducible diffuser” [Office Action, page 4, lines 13-15].

Again, Applicants respectfully disagree and traverse the rejection. The rejection should be withdrawn because combination of references fails to teach all of the claim elements of Applicants’ amended claims. See MPEP §2143. As noted above, the combination of Saurer and Washo does not teach, expressly or otherwise, Applicants’ “scattering portion...located between the substrate and the reflective electrode inclusive, such that the light is scattered before and after it is reflected from the reflective electrode.” Savant does not cure this deficiency of Saurer and Washo. Instead, Savant merely teaches a methodology for fabricating surfaces with specified topography.

Because the combination of Saurer, Washo, and Savant fails to teach, disclose, or suggest all of the claim elements, the rejection of claims 36 and 50 should be withdrawn. MPEP §2143.

4. There is No Proper Motivation to Combine
Saurer, Washo, and Iwata

In rejecting claims 37 and 51, the Office Action alleges that Saurer and Washo disclose all of the limitations of these claims, except for a scattering portion that is a layer in which scattering bodies are minute particles. For this claim element, the Office Action relies on Iwata, arguing that Iwata “discloses a light diffusing film with scattering bodies (resin beads) [that] are added to a light transmissive resin that inhibits scattering reflection which causes displays to be too white” [see Office Action, paragraph bridging pages 4 and 5].

Applicants note, however, that Saurer’s electro-optic passive display device already has an opaque conductive metallic coating 8 that acts as a reflector/diffuser [col. 1, lines 49-50]. Thus, the addition of Iwata’s light diffusing film as a diffuser, as proposed by the Office Action, would be redundant. Further, there is no teaching, express or otherwise, in any of the references that such a combination resulting in a device with two diffusing layers could or should be made. Accordingly, Applicants contend that the proposed combination of Saurer, Washo, and Iwata results from impermissible hindsight reconstruction of the Applicants’ invention. See MPEP §2145. For at least this reason, Applicants respectfully request the reconsideration and withdrawal of the rejections of claims 37 and 51 under 35 U.S.C. §103(a).

5. Claims 40 and 52 Are Not Unpatentable Over the
Combination of Saurer, Washo, and Gyotoku

In rejecting claims 40 and 52, the Office Action relies on Saurer and Washo for all claim elements, except for an organic electroluminescent layer. For this element, the Office Action relies on Gytoku's discussion of an organic electroluminescent element. The Office Action asserts that "at the time of the invention, it would have been obvious to one of ordinary skill in the art to use an organic electroluminescent element for high reliability" [Office Action, page 5, lines 10-11].

The Office Action's reasoning is flawed. A closer inspection of these references reveals that they teach away from the proposed combination. In particular, Applicants note that in Saurer's device, both sides of the electroluminescent layer are coated with silicon monoxide (SiO) [see Saurer, col. 1, lines 40-50]. Gytoku, however, explicitly warns against using SiO as a material for coating an organic luminescent layer. According to Gytoku

[i]ncidentally, as for the organic material used in the organic electroluminescence element, the upper limit of the heating temperature allowed in the manufacturing process is about 100 °C. Therefore, this temperature cannot be exceeded if forming protective film by vapor deposition method or the like , but as for the oxide film such as GeO, SiO, and SiO₂ used as protective film, it is hard to form a sufficiently dense film at low temperature of about 100 °C. generally, and in such film forming condition, multiple defects and pin holes are present in the film, and moisture and oxygen cannot be shut off completely. If attempted to solve these problems by increasing the film thickness, the internal stress of the protective film increases as the film thickness increases, the damages are given to the cathode 66 or organic thin film layer 63, which may possibly lead to lowering of light emitting luminance or short-circuit of the organic electroluminescence element. [Gytoku, col. 3, lines 45-61, emphasis added]

The references themselves teach away from the combination proposed by the Office Action. For at least this reason, the rejection of claims 40 and 52 over the combination of Saurer, Washo, and Gytoku should be withdrawn. MPEP §2145.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

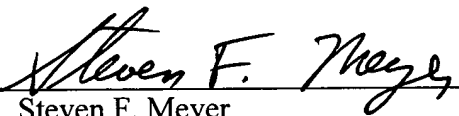
AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **13-4500**, Order No. 5000-5109. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **13-4500**, Order No. 5000-5109. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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